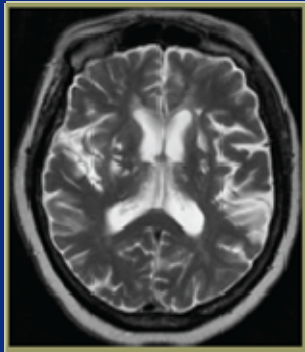


## What is Magnetic resonance imaging (MRI) ?

MRI is a sophisticated technique used to look inside the body. It uses a powerful magnet and radio waves to construct detailed images which can be used to diagnose a wide range of medical conditions affecting soft tissue structures and organs in the body.

MRI produces cross-sectional images of the body, much like slices of bread. By collecting a series of these images, MRI can create a multidimensional view of your body that greatly enhances doctors' ability to diagnose medical conditions.

MRI image of the brain



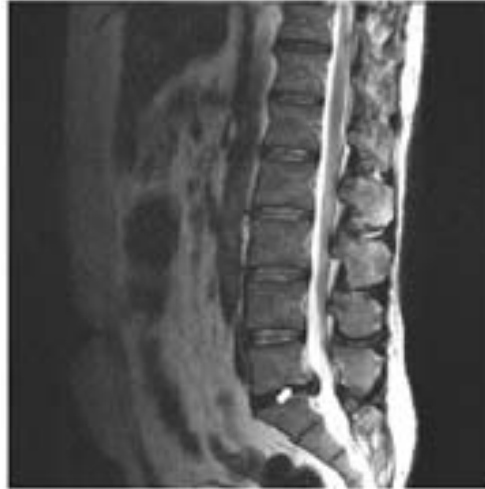
**Please remember that all Central Health sites are smoke-free. Please do not smoke while visiting Central Health sites.**

**Thank you!**



## After your MRI exam

There is no recovery time, unless sedation is required. After an MRI scan you can resume normal diet, activity and medications.



For more detailed information on "how MRI work" you may visit the following website:

<http://health.howstuffworks.com/mri.htm>

### ▶ Diagnostic Imaging

**James Paton Memorial Regional Health Centre,**  
125 Trans Canada Highway,  
Gander, NL A1V 1P7

**Central Newfoundland Regional Health Centre,**  
50 Union Street,  
Grand Falls-Windsor, NL A2A 2E1

CH-DI 008

## Diagnostic Imaging

## Magnetic resonance imaging (MRI)

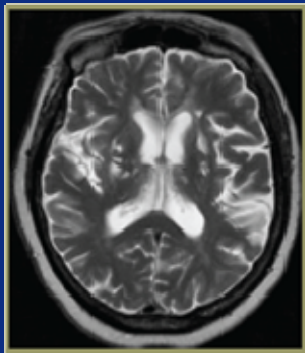


**What you need to know...**

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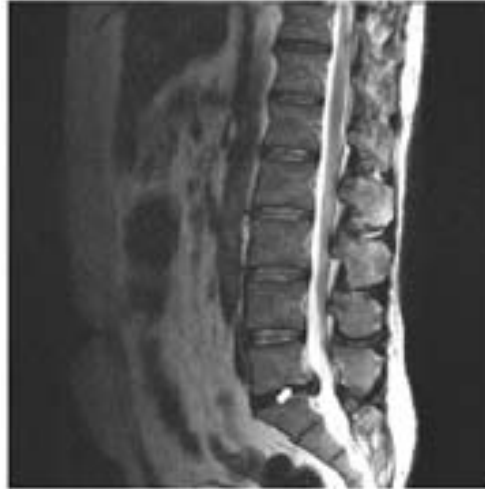
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## Diagnostic Imaging

## Magnetic resonance imaging (MRI)



**What you need to know...**

# Diagnostic Imaging - Magnetic resonance imaging (MRI)

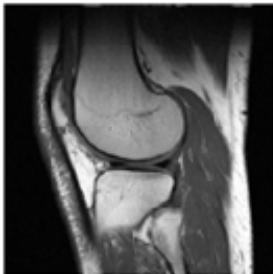
## Is MRI safe for patients?

There is no exposure to x-ray radiation during a MRI test. There are no known harmful effects to patients. However, if you are pregnant or think you may be, let your doctor or the technologist know, as the test may be postponed depending on it's necessity.

The MRI scanner is a very strong magnet, about 10,000 times stronger than the natural background magnetism from the earth. Therefore, screening patients for metallic and magnetic implants or items is very important. You will be asked to complete a detailed form for this purpose. Although many items are safe (such as dental fillings, hip replacements and surgical staples) we need to be very careful when screening patients.

MRI makes use of radio waves similar in frequency to those of ordinary FM radio stations. The scanner is in a special room shielded to avoid outside influence from those radio frequencies.

When operational, the MRI scanner is very noisy, making tapping and banging noises. This is how the unit works to create images. You will be provided with earplugs to protect your ears.



## What to expect during your MRI

After completing your screening information, you will be asked to remove all metallic objects (watches, jewellery, hairpins, dentures) and change into hospital clothing.

For the abdominal or pelvis exams, you will be asked to fast for up to six hours prior to your exam.

During the exam you will lay on a padded table which slides into the machine. The MRI "tube" is only about 4 feet long, open at both ends, well lit and ventilated. Your position in the machine will vary depending on the exam to be performed. You will have regular contact with the technologist. The MRI scanner has become much more comfortable for patients over the years. However, if you feel claustrophobic, there are ways we can help you through your exam. For extreme claustrophobia, your doctor may prescribe a mild sedative to help you relax. We will instruct you to take this medication once you arrive in our department, and you will need to be accompanied by a driver.

Other small devices may be placed around the head, neck, abdomen, leg or other areas to be imaged. These are special cameras called "coils" which send and receive the radio pulses, and are designed to improve the quality of the imaged.

It is important that you remain perfectly still during the entire exam once you have been positioned on the table.

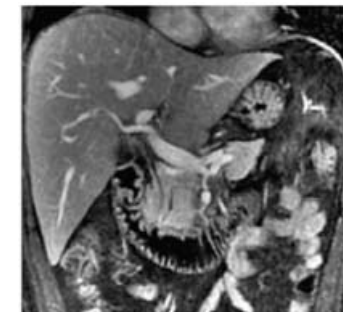
Movement will blur the pictures and changes in your position do not allow for accurate imaging of the area being examined.

Most MRI exams can be performed within 30 minutes. However, some can take 60 to 90 minutes depending on the area being examined.

## Intravenous injections

For some procedures, it may be necessary to inject a special contrast material (Gadolinium), sometimes referred to as "dye", which enables radiologists to see specific areas of your body more clearly. The need for this will be determined by the radiologist, based on the information your doctor provides us. The injection is usually performed towards the end of the examination by the technologist.

Most people tolerate this injection without complications, however mild reactions may occur including nausea, vomiting, itching and hives. These reactions will pass without treatment or respond quickly to medication. Rarely, more severe reactions can occur including drop in blood pressure and irregular heartbeat.



MRI image of the liver

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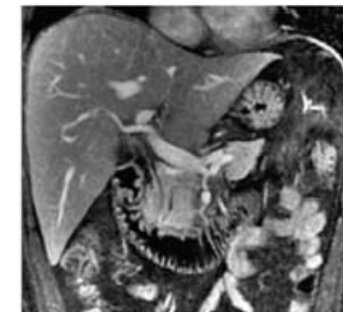
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MRI image of the liver